

# Section # 3

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# To Do

- ▶ Health Insurance:
  - ▶ economic fundamentals
  - ▶ insurance types
- ▶ Medicine in the United States and around the World

# Health Insurance: Fundamentals

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► what economic object are we talking about?

# Expected Utility

Whether and how much one decides to ensure depends on:

- ▶ shape of utility function ( $\leftrightarrow$  risk aversion)
- ▶ the possible unfolding of events (i.e. the probability of each scenario).

In economics we usually think of people as **risk-averse**, not liking risk everything else being equal. This is expressed mathematically through the shape of the utility function in particular:

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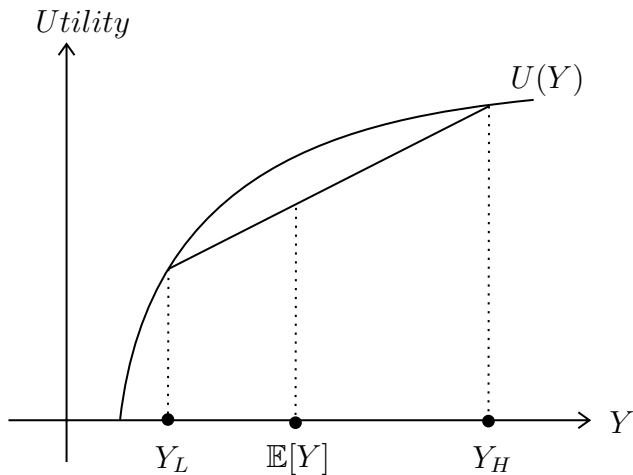
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- ▶  $u''(c) \leq 0$ ?

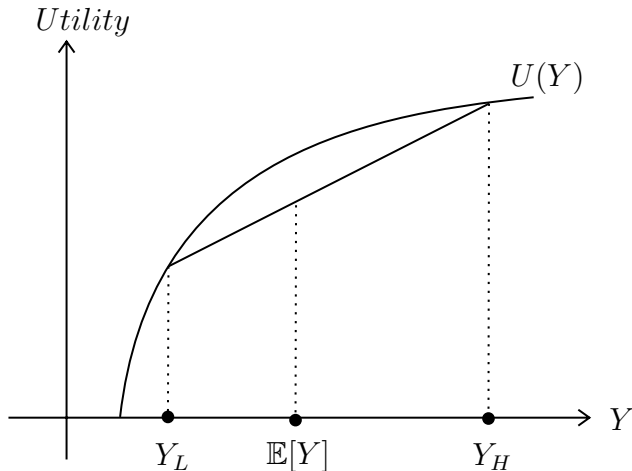


# Insurance in Pictures

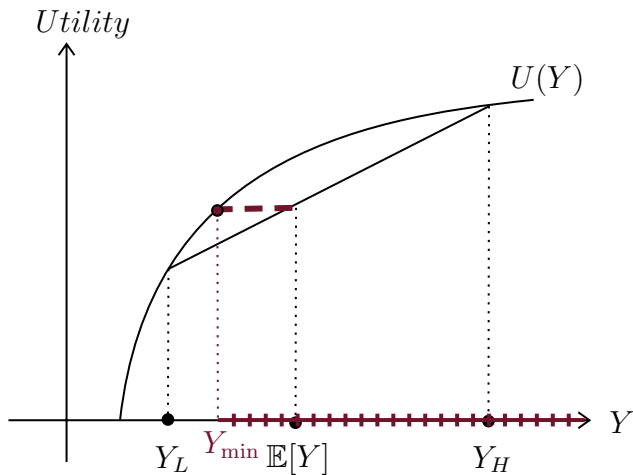


## Insurance in Pictures

What income am I willing to accept for sure instead of gambling in the picture below?

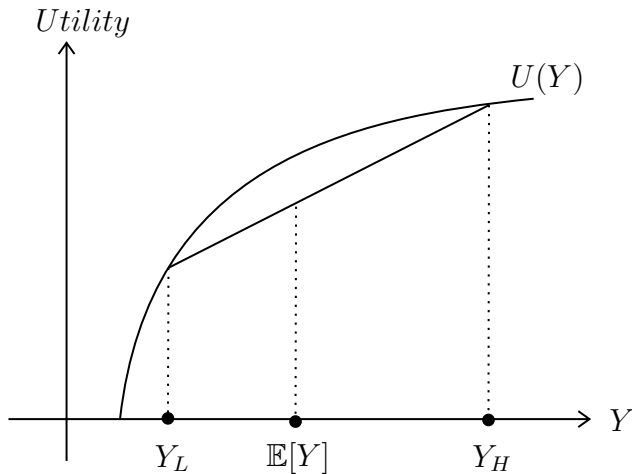


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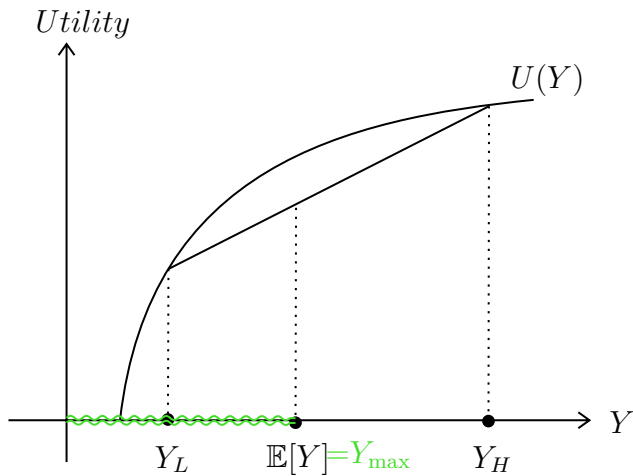


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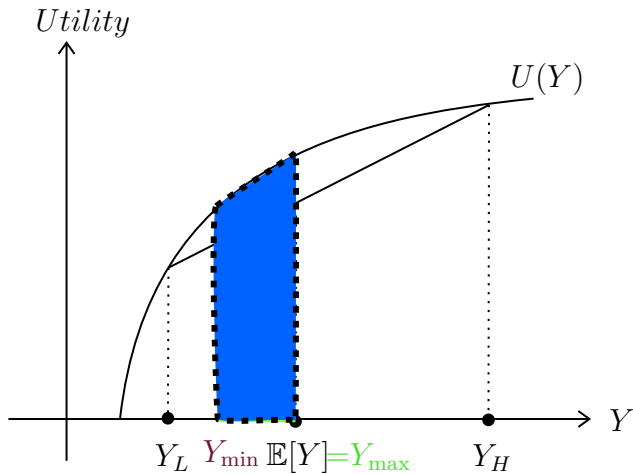
What income is my insurer willing to give me in the picture below?



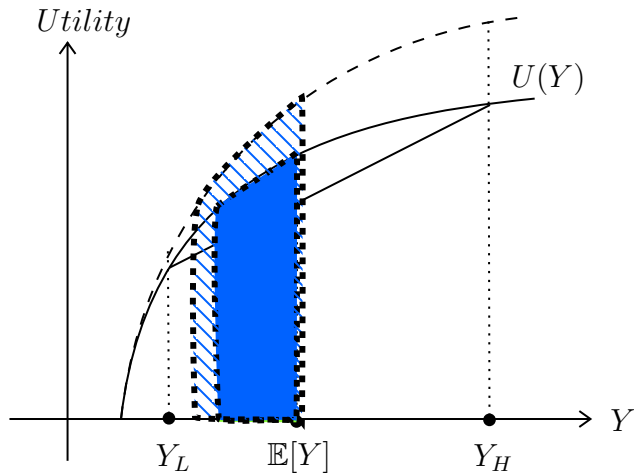
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- ▶ **Actuarially Fair**

- ▶ The expected payment under insurance is the same as without insurance:

$$\mathbb{E}_{\text{insurance}}[Y] = \mathbb{E}_{\text{no insurance}}[Y]$$

# Types of Insurance

Suppose your income is  $Y_L = \$0$  with probability 0.5 and  $Y_H = \$100$  with probability 0.5, categorize the following insurance plans by type:

A.  $Y_L^{\text{insurance}} = \$25, \quad Y_H^{\text{insurance}} = 75$

B.  $Y_L^{\text{insurance}} = \$50, \quad Y_H^{\text{insurance}} = \$50$

C.  $Y_L^{\text{insurance}} = \$40, \quad Y_H^{\text{insurance}} = \$40$

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Examples ?

- ▶ have health insurance and decide to join a bull-riding competition
- ▶ seat belts → you know you are safer and incentivize you to drive faster

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- ▶ higher education cost  $\Rightarrow$  higher compensation  $\Rightarrow$  higher cost to “healthcare consumers”
- ▶ legal liability is a bigger issue in the US. It’s easier to sue doctors and they have to be compensated for this extra risk with higher wages.